

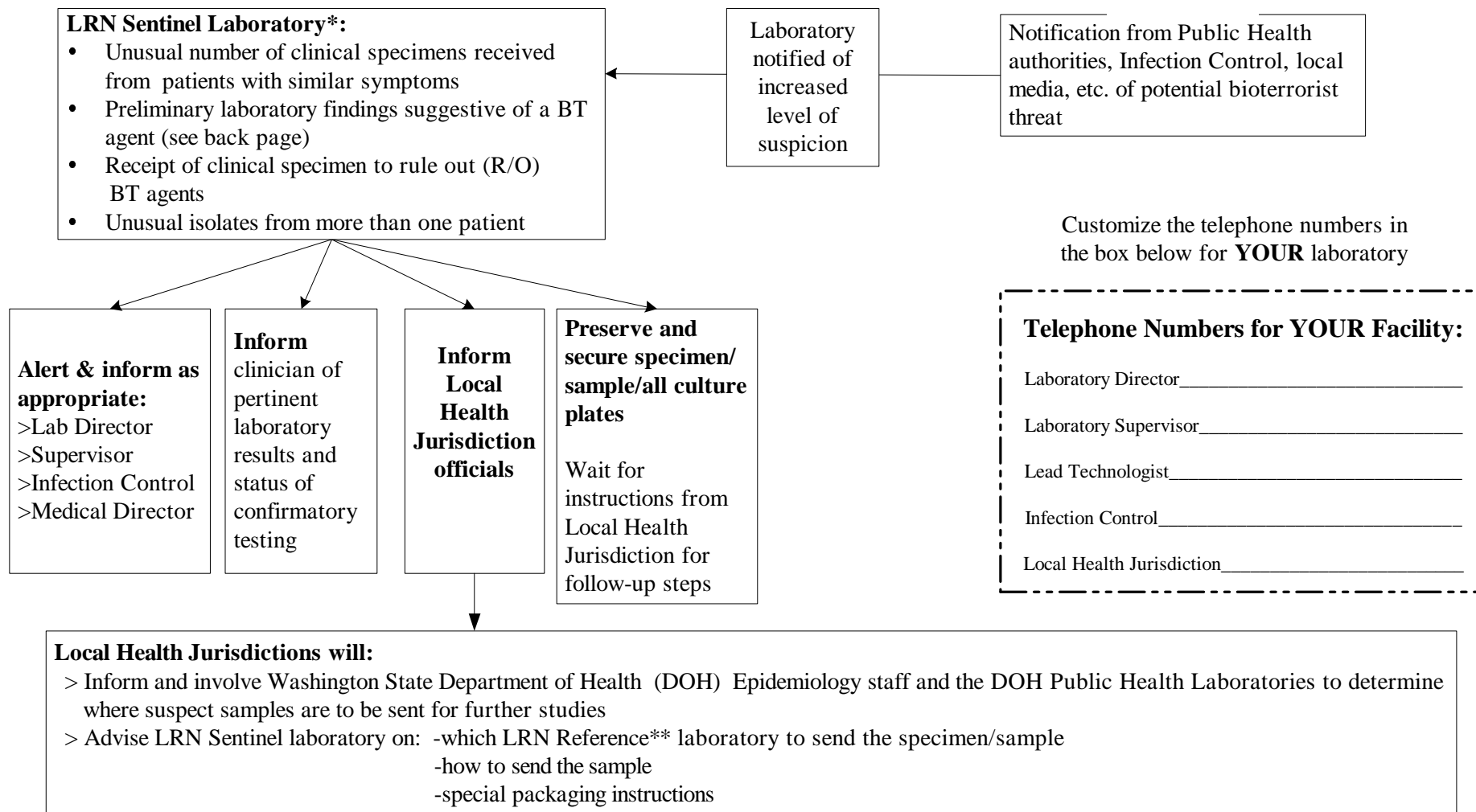
CLINICAL LABORATORY SUSPECTED BIOTERRORISM (BT) EVENT MANAGEMENT GUIDELINE

Washington State Clinical Laboratory Advisory Council

April 2003

Covert Event

Overt Event



Notification from Public Health authorities, Infection Control, local media, etc. of potential bioterrorist threat

Laboratory notified of increased level of suspicion

Customize the telephone numbers in the box below for **YOUR** laboratory

Telephone Numbers for YOUR Facility:

Laboratory Director_____

Laboratory Supervisor_____

Lead Technologist_____

Infection Control_____

Local Health Jurisdiction_____

* **LRN Sentinel Laboratory:** Laboratories that perform microbiology testing to RULE OUT a BT agent.

** **LRN Reference Laboratory:** Laboratories specifically authorized by the Centers for Disease Control and Prevention to perform testing to RULE IN the BT agent.

ENVIRONMENTAL SAMPLES: DO NOT ACCEPT any type of non-clinical specimen such as powders, other suspicious substances, or packages.

Contact your Local Health Jurisdiction. REFER all phone calls from people regarding environmental specimens to local law enforcement or to your local health jurisdiction.

LRN SENTINEL LABORATORY REFERENCE TABLE

| Agent | Culture Methods | Incubation Methods | Recovery Time | Colonial Morphology | Gram Stain Morphology | Preliminary Identification Tests | Action |
|---|--|---|--|--|--|---|---|
| <i>Bacillus anthracis</i> From: vesicle, sputum, CSF, blood, stool, rectal swab | Blood, Chocolate agar No growth on Mac | 35°C in ambient air or CO ₂ | 8-24 hours | Non-hemolytic, gray colonies with ground glass appearance which “peaks” when touched | Large gram positive rods, oval, sub-terminal spores, no swelling of cell., capsules may be seen from specimen Gram stained | Catalase—positive Motility—negative | Refer to Laboratory designated by the local health jurisdiction |
| <i>Francisella tularensis</i> From: Blood, tissue, sputum, lymph nodes | Chocolate, BCYE, Thioglycollate, and Thayer-Martin agar Poor growth on BA No growth on Mac | 35°C in CO ₂ | ~24-48 hours Hold up to 10 days | Very small, blue/gray colonies | <u>Tiny</u> gram negative coccobacilli poorly staining | Catalase—negative or weakly positive Oxidase—negative Urea—negative Motility—negative XV strip-no satelliting | Refer to Laboratory designated by the local health jurisdiction |
| <i>Yersinia pestis</i> From: Lymph node, blood, spleen, liver, sputum, bubo | Grows on routine culture media | 22-28°C in ambient air or CO ₂ | Grows slowly, 24-48 hours | Small, fried egg colonies may look like beaten copper | Gram negative rods which may show bi-polar staining | Catalase –positive Oxidase—negative Urea—negative Motility –negative TSI—weak acid slant, no change in butt | Refer to Laboratory designated by the local health jurisdiction |
| <i>Brucella sp.</i> From: Blood, bone marrow, tissue, CSF | Blood, Chocolate, Thayer-Martin or BCYE agar Some strains grow on Mac | 35°C in CO ₂ | Normally 24-72 hours, may take up to 30 days | Small, gray/white colonies, punctate | Small gram negative cocco-bacilli, poorly staining | Catalase—positive Oxidase—positive Urease—positive XV—negative | Refer to Laboratory designated by the local health jurisdiction |
| <i>Clostridium botulinum</i> From: Feces, tissue, wound exudates, gastric contents | Blood or brucella agar Chopped meat Broth | Anaerobic incubation at 35°C | 24-30 hours | Beta hemolytic with rhizoid colonies on moisture-free media; always swarms on damp media | Gram positive rods with oval, sub-terminal spores which swells the cell | Catalase—negative Indole—negative | Refer to Laboratory designated by the local health jurisdiction |
| <i>Burkholderia pseudomallei</i> & <i>mallei</i> From: Blood, sputum, wounds | Grows on routine culture media, strongly lactose + on Mac | 35°C in ambient or CO ₂ | 24 hours <i>B. mallei</i> grows more slowly | Creamy tan to orange wrinkled colonies when old, fresh isolate may look like mercury | Gram negative rods similar to Pseudomonas | Catalase—positive Oxidase—positive <i>B. mallei</i> - var. oxidase/non-motile | Refer to Laboratory designated by the local health jurisdiction |

References:

1. **Basic Diagnostic Testing Protocols for Level A Laboratories** (updated: December 18, 2002). Centers for Disease Control and Prevention, American Society for Microbiology, and the Association of Public Health Laboratories.
2. **Biological and Chemical Terrorism: Strategic Plan for Preparedness and Response.** CDC MMWR Volume 49/No.RR-4, April 21, 2001.
3. **Manual of Clinical Microbiology, 7th ed.**, American Society for Microbiology, 1999. Patrick R. Murray, editor-in-chief.
4. **USAMRIID’s Medical Management of Biological Casualties, Handbook 4th ed.** February, 2001 – Appendix E.